



## Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at <http://about.jstor.org/participate-jstor/individuals/early-journal-content>.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact [support@jstor.org](mailto:support@jstor.org).

## A SYNOPSIS OF THE SUBFAMILIES AND GENERA OF THE MEMBRACIDÆ OF NORTH AMERICA.

BY F. W. GODING, M.D., PH. D.

### Synopsis of Subfamilies.

- A. Scutellum distinct, produced beyond metanotum, apex usually sinuate and furnished with acute apical angles..... **CENTROTINÆ** Stal.
- B. Scutellum obsolete or wanting, not extending beyond metanotum.
  - a. Tarsi of equal length, or posterior longer than anterior.
    - b. Tibiæ simple.
      - c. Tegmina behind clavus folded, outside coriaceous, opaque, with scarcely distinguishable veins externally; clavus and interior basal cell of corium toward apex widened, intermediate apical cell of corium petiolate in the coriaceous part..... **TRAGOPINÆ** Stal.
      - cc. Tegmina entirely membranous, veins distinct.
        - d. Third apical cell elongate, never petiolate..... **DARNINÆ** Stal.
        - dd. Third apical cell subtriangular, petiolate, adjacent cells contiguous. **SMILINÆ** Stal.
    - bb. Tibiæ and sides of face dilated, foliaceous..... **MEMBRACINÆ** Stal.
  - aa. Posterior tarsi small, shorter than anterior..... **HOPLOPHORINÆ** Stal.

### Synopsis of Genera.

Subfamily **CENTROTINÆ** Stal.

Tribe *Aethalionini* Godg.

- A. Thorax with no posterior process extending beyond scutellum.
  - a. Prothorax horned above lateral angles ..... **Tolania** Stal.
  - aa. Prothorax unarmed above lateral angles..... **Aethalion** Latr.

Tribe *Centrotini* Godg.

- B. Thorax giving off a posterior process extending beyond scutellum.
  - a. Clavus gradually attenuated to apex.
    - b. Anterior tibiæ dilated..... **Lycoderes** Germ.
    - bb. Anterior tibiæ simple.
      - c. Above lateral angles armed on each side with a stout horn. **Centruchus** Stal.
      - cc. Above lateral angles unarmed.
        - d. Back of prothorax developed into a rounded gibbosity. **Centrodontus** Godg.
        - dd. Back of thorax simple.
          - e. Posterior process of thorax long, acutely narrowed to apex, covering internal margin of tegmina..... **Delauneya** Leth.
          - ee. Posterior process very short ..... **Microcentrus** Stal.

Tribe *Boocerini* Godg.

- aa. Clavus not or slightly narrowed towards apex, not gradually acuminate.
- f. Anterior margin of prothorax straight or broadly sinuate.
- g. Wings with four apical cells; scutellum bidentate or emarginate at apex.
- h. Outer veins of claws long, united with the commissure at a greater or less distance beyond middle of claws; thoracic process long.
- j. Outer discoidal cell of corium stylate or subtriangular, not truncate at base.
- k. Head very broad ..... **Monobelus** Stal.
- kk. Head narrower than prothorax between lateral angles.
- jj. Outer discoidal cell of corium truncate at base, sessile.
- l. Prothoracic process nearly straight, broadish at base, not lobed beneath, and covering greater part of scutellum; a transverse venule between rami of ulnar veins..... **Orthobelus** Stal.
- ll. Prothoracic process covering scutellum; destitute of a transverse venule between rami of ulnar vein.
- m. Posterior process narrowed at base, broadened into a lobe at middle..... **Campylocentrus** Stal.
- mm. Posterior process not lobed beneath.... **Callicentrus** Stal.
- hh. Outer vein of clavus long, subpercurrent, attaining apex; prothoracic process extending but little beyond middle of abdomen.
- ..... **Platycentrus** Stal.
- gg. Wings with three apical cells..... **Brachybelus** Stal.
- ff. Anterior margin of prothorax projecting nearly in a right angle; prothorax carinate..... **Goniolomus** Stal.

## Subfamily TRAGOPINÆ Stal.

- A. Tegmina about half free; four basal cells; no discoidal..... **Horiola** Fairm.
- B. Tegmina almost completely covered by prothorax; less than four basal cells.
- a. Three basal cells; two or three discoidal cells..... **Parmula** Fairm.
- aa. Two basal cells, one discoidal; posterior margin very broad, occupying nearly one-third of tegmina..... **Tragopa** Latr.
- \*. Base of prothorax armed with two conical horns; furnished with an acute carina; lateral margins in front between eyes and lateral angles with carina..... Subg. **Ceratopola** Stal.
- \*\*\*. Base of prothorax unarmed, destitute of a carina.... Subg. **Tragopa** Stal.

## Subfamily DARNINÆ Stal.

Tribe *Darnini* Godg.

- A. Wings longer than half of tegmina.
- B. Posterior prothoracic process covering clavus, excepting basal part, very frequently a larger or largest part of corium, reaching and sometimes exceeding apex of tegmina; above lateral angles destitute of a horn or process; head broad, short, perpendicular, truncated or broadly rounded; ocelli farther from the eyes than from each other; prothorax not tectiform, convex, lightly punctured, destitute of a carina.

- a. Head and prothorax smooth, very lightly punctulate; head very obtuse, margin from apex to eyes lightly rounded; prothorax with lateral angles distinct, anterior margin not callous, posterior less broad; external half of tegmina free; lobe of prostethium on each side behind eyes extended downward.
- b. Ocelli almost equally remote from each other and the eyes; border of prothorax from eyes almost continuously to posterior apex yellow or piceous, not interrupted ..... **Darnis** Fabr.
- bb. Ocelli distinctly nearer each other than to the eyes; an oblique lateral line below margin anteriorly, and lateral border behind lateral angles abbreviated posteriorly, yellow; head with three spots.

**Ochrolomia** Stal.

- aa. Prothorax covering all or largest part of tegmina; prostethium on each side behind eyes widened into a distinct lobe; prothorax punctulate; body thick; head very obtuse; ocelli more remote from the eyes than from each other, occasionally almost double the distance; corium having two longitudinal veins, both forked far from base, two discoidal cells separated by longest basal cell; longitudinal veins forked equally distant from base; tegmina partly free..... **Stictopelta** Stal.

Tribe *Aconophorini* Godg.

- BB. Posterior prothoracic process touching interior margin of clavus, or its longitudinal vein, very rarely covering apical part of clavus and narrow interior, posterior part of corium; all or nearly all of tegmina free; corium with two discoidal cells.
- c. Discoidal cells elongate, nearly equal in length; prothorax anteriorly with a porrect horn above head, or angulate or horned above lateral angles.
- d. Prothorax anteriorly strongly elevated, armed above lateral angles with a process directed outwards and sometimes upwards, or angulated.
- e. Prothorax above lateral angles without an impression, strongly elevated, armed on each side with long horns; posterior process with apex touching clavus, equaling or exceeding apex of tegmina, back wholly tectiform or compresso-acute.

**Hemiptycha** Germ.

- ee. Posterior process of prothorax not touching apex of clavus.
- f. Ocelli much nearer to each other than to the eyes.. **Pyranthe** Stal.
- ff. Ocelli from each other and the eyes almost equally distant.
- g. Front of prothorax highly elevated and greatly declivous, elevated part on each side above lateral angles broadened in a long horn or angle; posterior process behind middle sinuate on each side, behind sinus slenderer; form of prothorax differs in sexes; above lateral angles not or slightly impressed.

**Hyphinoe** Stal.

- gg. Front of prothorax convex and sensibly declivous; prothorax slightly or moderately elevated, above lateral angles impressed; above impressions suddenly broadening in an acute angle or short, acute horn..... **Tomogonia** Stal.

- dd.* Prothorax anteriorly armed with a porrect process pointing slightly upwards, or ending in a prominent angle; behind process convex; unarmed above lateral angles; tegmina surpassing apex of posterior process; body sericeous.....**Aconophora** Fairm.
- cc.* The two discoidal cells of corium differing in size, the interior much larger and longer than exterior; prothorax unarmed anteriorly above head, and above lateral angles on each side not produced; back of prothorax convex, posterior process compressed or tectiform towards apex; margin of back destitute of a sulcus.
- h.* Prothorax highest at middle, posterior process compressed, superior margin very acute; head broad, transverse, apex broadly rounded; ocelli equally distant from each other and the eyes.
- Eumela** Stal.
- hh.* Prothorax highest forward, dorsum almost wholly convex, posterior process tectiform towards apex; head angular at apex, front somewhat prominently deorsum; ocelli nearer to each other than to the eyes ..... **Darnoides** Fairm.

### Tribe *Heniconotini* Godg.

- AA.* Tegmina double the length of wings; head broad, eyes prominent; posterior prothoracic process long, nodose and spined, more than half of apical part a little recurved.
- a.* Anterior tibiæ dilated; prothorax densely and strongly punctured, posterior process rugose-reticulate towards apex....**Heteronotus** Lap.
- aa.* Anterior tibiæ simple; prothorax smooth or obsoletely and remotely punctured ..... **Heniconotus** Stal.

### Subfamily SMILIINÆ Stal.

#### Tribe *Cerasini* Godg.

- A.* Tegmina free, clavus uncovered, the interior margin of this touching the exterior margin of the posterior prothoracic process, this latter visibly narrowed behind the lateral angles.
- a.* Passing out of base of corium two longitudinal veins, radial and ulnar, contiguous at or near base, forked a little before middle of tegmina; three discoidal cells, rarely four, the middle one elongated, the others almost equal to it in length, the fourth, when present, placed before these; interior and external basal cells long, extending beyond middle of tegmina, not or slightly enlarged towards apex; five terminal cells middle one apical.
- b.* Posterior prothoracic process 3-forked; apical cell of wings stylated.
- c.* Posterior prothoracic process armed anteriorly with two erect spines, behind which it is narrowed into short recurved styles, apex forked ..... **Cyphonia** Lap.
- cc.* Posterior prothoracic process sensibly narrowed backward, strongly swollen in front, not bispined, not reflexed behind the tumidity, from the middle 3-forked; otherwise as in *c.*.....**Poppea** Stal.
- bb.* Posterior prothoracic process not 3-forked.
- d.* Prothorax much elevated in front, horned above lateral angles, posterior process very acute throughout.....**Ceresa** A. et S.

- dd.* Prothorax convex in front, unarmed, posterior process convex at least as far as middle ..... **Stictocephala** Stal.
- aa.* Passing out of base of corium three longitudinal veins, one radial, two ulnar, all or two contiguous toward base of tegmina; prothorax convex, posterior process sensibly acuminate; apical cells of wings not stylated, base truncate.
- e.* Corium with five apical cells; lateral margins of prothoracic posterior process distinctly impressed lengthwise.... **Phacusa** Stal.
- \*. Corium with two discoidal cells.....Subg. **Euritea** Stal.
- \*\*. Corium with one discoidal cell.....Subg. **Phacusa** Stal.
- ee.* Corium with four apical cells, one discoidal; lateral margins of posterior prothoracic process not or obsoletely impressed.
- Acutalis** Fairm.

### Tribe *Polyglyptini* Godg.

- AA.* Clavus, and frequently part of corium, covered by prothorax.
- a.* Passing out from base of corium two veins, radial and ulnar, contiguous at or near base of tegmina; apical cells of wings stylated.
- b.* Anterior part of prothorax destitute of a porrect process.
- c.* Back of prothorax acute, strongly elevated, compressed, deeply notched. **Entylia** Burm.
- cc.* Back of prothorax convex, before or at middle little depressed. **Publilia** Stal.
- bb.* Anterior part of prothorax armed with a long, porrect process. **Polyglypta** Burm.

### Tribe *Smiliini* Godg.

- aa.* Passing out from base of corium three veins, contiguous near base.
- d.* Wings with three, and frequently four, apical cells, the second in that case stylated.
- e.* Corium with one or two discoidal cells.
- f.* Corium destitute of a transverse venule between the two interior longitudinal veins, before the middle; one discoidal cell before the second apical cell; back of prothorax strongly elevated, compressed, acute, highest anteriorly. **Smilia** Germ.
- ff.* Corium with a transverse venule between the two interior longitudinal veins; two discoidal cells, one before the two interior apical cells and behind the transverse venule, the other before the second apical cell.
- g.* Prothorax with back compresso-acute.
- h.* Prothorax with a large elevation, before the middle highest, posteriorly acuminate, lateral angles produced in a triangular lobe, which extends obliquely outward; tegmina scarcely reaching apex of posterior prothoracic process. **Janthe** Stal.
- hh.* Prothorax lightly compresso-elevated, lateral angles obtuse, not prominent; front angles not produced.

**Cyrtolobus**† Godg.

† = *Cyrtosia* Fitch, which is preoccupied in the Diptera.

- \*. Prothorax anteriorly obtuse, convex, dorsum behind lateral angles compresso-acute, at or before middle highest.

Subg. **Cyrtolobus** Godg

- \*\* Prothorax anteriorly highest, dorsum also between and before lateral angles a little compresso-acute, or more highly carinated.....Subg. **Atymna** Stal.

- \*\*\* Prothorax with two humps or gibbosities separated by a sulcus, more or less rugose.....Subg. **Ashmeadea** Godg.

- gg. Prothorax with dorsum convex, smooth or lobed, slightly and obtusely unicarinate.

- j. Third apical cell of tegmina transverse elliptical.

**Vanduzee** Godg.

- jj. Third apical cell of tegmina triangular.

**Ophiderma** Fairm.

- ee. Corium destitute of discoidal cells; prothorax, seen from the side rotundate forward.....**Adippe** Stal.

### Tribe *Telamonini* Godg.

- dd. Wings with four apical cells, the second sessile, base truncated.

- l. Back of prothorax armed with horn or compressed protuberance; lateral angles straight or acute, prominent.

- m. Prothorax armed, before the middle, with a long horn pointing upwards and slightly forwards.....**Thelia** A. et S.

- mm. Prothorax armed between and behind lateral angles with an erect crest or protuberance.

- n. Protuberance or crest rounded or truncate at apex.

**Telamona** Fitch.

- nn. Crest deeply sinuate at apex, before sinus strongly elevated, behind sinus lower; angulate posteriorly.....**Heliria** Stal.

- ll. Back or front of prothorax not crested or horned.

- p. Prothorax convex, obtuse, not or very slightly compresso-elevated, with an obsolete longitudinal carina, lateral angles rounded, slightly prominent.

- r. Prothorax impressed behind lateral angles, sloping of anterior and posterior portions similar, rather abrupt.

**Optilete** Stal.

- rr. Prothorax not impressed behind lateral angles; posterior sloping of prothorax behind middle very gradual, not abrupt.....**Carynota** Fitch.

- pp. Prothorax strongly compresso-elevated, very acute on back, seen from side rounded, very high anteriorly; lateral angles somewhat prominent.....**Archasia** Stal.

### Subfamily MEMBRACINÆ Stal.

- A. Head 3-lobed, elongate; prothorax usually with fungiform processes, variable in form; ocelli above a line passing through the eyes.

**Sphongophorus** Fairm.

**B. Head not 3-lobed.**

- a.* Ocelli above a line passing through eyes.....**Pterygia** Fairm.  
*aa.* Ocelli on a line with the eyes.

*b.* Prothorax destitute of an anterior process.

- c.* Prothorax much compresso-elevated, very high, foliaceous, seen from side, rounded anteriorly, destitute of lateral carinæ.

**Membracis** Fabr.

- cc.* Prothorax rugose and carinated, not foliaceous; body globular; tegmina with short, irregular cells; size very small.

**Bolbonota** Fairm.*bb.* Prothorax furnished with an anterior process.

- d.* Anterior process grooved along middle; behind lateral angles a lobe, compressed laterally, rounded anteriorly; tegmina with four basal, three discoidal cells.....**Nessorhinus** A. et S.

*dd.* Anterior process with carinæ on each side at least in anterior part.

- e.* Posterior prothoracic process not reaching apex of tegmina.

- f.* Prothorax strongly compresso-elevated, very high in front, frequently produced in a horn, decreasing in height backward, furnished with a carina on each side in anterior superior part not extending back of lateral angles, summit foliaceous.

**Euchophyllum** A. et S.

- \*. Anterior and posterior part of prothorax strongly dilate-foliaceous, anteriorly in front of head and below front margin produced rounding downwards; back rounded anteriorly, destitute of a process; furnished with a carina on each side.

Subg. **Phyllotropis** Stal.

- \*\*. Anterior part of prothorax with a compressed process, carinate on each side, foliaceous-carinate under horn continuously to apex.....Subg. **Enchophyllum** A. et S.

- \*\*\*. Anterior part of prothorax produced superiorly in an angle or compressed process carinate on each side, below angle or process with a carina of variable height; apex low, very slightly elevated..... Subg. **Tropidocera** Stal.

- ff.* Prothorax at least tri-carinate on back, middle carina sometimes strongly foliaceous-elevated, the lateral carinæ next to middle carina extended at least across middle of posterior process.

- g.* Prothorax highly carinate in middle of back, with a compressed horn anteriorly, or a compressed angle; with some abbreviated carinæ in part turned forward.....**Enchenopa** A. et S.

- \*. Anterior horn of prothorax above and below foliaceous-carinate, with lateral carinæ of horn in middle of sides or near lower margin.....Subg. **Enchenopa** A. et S.

- \*\*. Anterior horn of prothorax foliaceous-carinate above, a distinct carina below, but not foliaceous, lateral carinæ approaching nearer superior than lower margin of horn; apex of head truncate, slightly transverse.....Subg. **Campylenchia** Stal.

- gg.* Prothorax convex anteriorly and unarmed, or projecting in an angle or process flat above, not compressed.

**Tropidoseyta** Stal.



- ee.* Body slender. prothorax low, not compresso-elevated, middle of back acutely carinated, furnished with an anterior process, long, thickened, subcompressed, porrect, apex ascending, posterior process long, equaling or exceeding apex of tegmina, somewhat narrowed toward apex, before middle subcoarctate.

**Aechmophora** Stal.

### Subfamily HOPLOPHORINÆ Stal.

#### A. Wings with four apical cells.

- a.* Prothorax more or less compresso-elevated, lateral angles produced.

**Triquetra** Fairm.

- aa.* Prothorax convex, unarmed or with a porrect horn in front, lateral angles scarcely or subprominent.

- b.* Prothorax unarmed, lateral angles subprominent.....**Ochropepla** Stal.

- bb.* Prothorax armed in front with a porrect horn, lateral angles scarcely prominent.....**Potnia** Stal.

#### B. Wings with three apical cells.

- c.* Anal cells of wings distinct, sublobate, one-nerved, posterior prothoracic process with apex not or slightly surpassing apex of abdomen.

- d.* Head very broad, obtuse, equal in breadth to base of prothoracic process, which is narrowed from the base.....**Platycotis** Stal.

- e.* Front of prothorax strongly declivous, anterior margin between eyes broadly sinuate.

- \*. Prothorax convex, unarmed, or in middle armed before lateral angles with a compressed, more or less porrect horn..Subg. **Platycotis** Stal.

- \*\*. Prothorax in front convex, behind lateral angles armed with a horn or process.....Subg. **Lophopelta** Stal.

- e. \** Front of prothorax less convex, sensibly and not at all perpendicularly declivous, anterior margin between eyes straight, lateral angles not or slightly prominent, posterior prothoracic process at the base first slightly then distinctly narrowed.....Subg. **Microschema** Stal.

- dd.* Head narrower than base of prothoracic process..**Hoplophora** Germ.

- \*. Prothorax destitute of an anterior or dorsal horn, posterior process with sides parallel towards base.....Subg. **Hoplophora** Stal.

- \*\*. Prothorax armed anteriorly with an oblique, porrect, compressed horn, posterior process narrowed from base..Subg. **Enchotype** Stal.

- ce.* Anal cells of wings very minute, not lobate; prothorax with an erect or inclined dorsal horn; posterior process surpassing apex of abdomen.

**Umbonia** A. et S.

Total number of genera in North America, sixty-five.

In the preparation of the above synopses I consulted the works of Stal, Fairmaire, Amyot et Serville, and the few American writers who have published their observations in this family. But my own collection has been of the greatest use.

A few errors may be discovered in these tables, as in some instances the location of certain genera were determined from a single representative. But in response to many requests I have prepared the tables, trusting that future studies will correct all inaccuracies.